King County Regional Infiltration/Inflow Control Program
Local Agency Workshop #7 Summary
Wednesday, January 30, 2002

Background

The King County regional wastewater treatment system includes wastewater interceptors, pump stations, treatment plants and outfalls. Thirty-four politically and administratively independent Local Agencies discharge wastewater from their systems to King County's regional wastewater system. Increased wastewater flows within this vast service area have used significant portions of, and in some cases have exceeded, the capacity of existing County facilities.

The Regional Wastewater Services Plan (RWSP) directs the County and the Local Agencies to take action on several components of the wastewater system, including new treatment, combined sewer overflows, water reuse, and infiltration and inflow (I/I). To comply with the portion of the RWSP that requires I/I to be addressed, the County in conjunction with the Local Agencies began the Regional I/I Control Program. A cornerstone of this Program is active involvement of Local Agencies in a consensus-based process that relies on a coordinated, collaborative approach to develop components of the Program. The Program includes extensive flow monitoring and modeling; I/I removal pilot projects; development of standards, procedures, and policies; assessing cost effectiveness of I/I reduction; and developing a Regional I/I Control Program for approval and adoption.

To educate and involve the Local Agencies in these decisions and to resolve issues related to I/I, 14 participatory workshops have been scheduled at key points during the I/I Control Program. To date, six workshops have been held to introduce participants to the issues; address technical, financial, and cost sharing issues; determine criteria for pilot project selection; and describe modeling of wastewater flows.

Local Agency Workshop #7 was held on Wednesday, January 30 at the Best Western Bellevue Inn in Bellevue, Washington. An attendance sheet is attached to this general summary of the Workshop.

Workshop Purpose

I/I Control Program Workshop #7 had the following objectives:

- Explain the Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) Regional Wastewater Services Plan (RWSP) subcommittee process for recommending Standards, Procedures, and Policies
- Review comments provided by Local Agencies on draft I/I control standards, procedures and policies
- Identify commonalities in thought and direction for draft I/I control standards, procedures and policies
- Identify key issues for resolution

Local Agency input on the draft standards, procedures and policies was solicited during the fall of 2001 and the comments supplied were incorporated into the workshop documents and presentations and made available at the workshop.

Local Agencies were encouraged to provide additional comments and input at this workshop to guide the ultimate I/I Control Program recommendations. Also featured was an update on various Program elements currently underway.

Welcome & Introductions

Don Theiler, Manager, King County Wastewater Treatment Division & Dave Christensen, City of Renton, MWPAAC Chair

Mr. Theiler, King County's Wastewater Treatment Division Manager, welcomed attendees and acknowledged the participation of Local Agencies in initiating and commenting on the draft I/I Standards, Procedures and Policies. He congratulated the recently elected officials in the room and initiated a round of introductions.

Mr. Theiler made it clear that King County intends to continue its support for the I/I Control Program and the inclusion of Local Agency input into the Program. A recent reorganization within the King County Wastewater Treatment Division (WTD) has led to the advancement of Gunars Sreibers, the initial I/I Control Program Manager, to become the Conveyance Systems Administrator at the WTD. Dan Sturgill, with 28 years of experience at Metro/King County, has been named the new I/I Control Program Manager. Given Mr. Sturgill's experience and the fact that Mr. Sreibers will remain with the WTD, the I/I Control Program and other components of the Regional Wastewater Service Plan is expected to stay on schedule.

Mr. Theiler voiced the need for common design and maintenance standards for I/I control projects and made it clear that these standards would be developed in a consensus-based, interactive process with Local Agencies.

Dave Christensen, Chair of MWPAAC, then spoke about the process for development of I/I control project Standards, Procedures and Policies ("the standards"). He emphasized that if the standards are to succeed, they would need to be developed using a regional approach where all impacted agencies can participate. The process that has been proposed to develop and refine the standards would involve the MWPAAC RWSP Subcommittee, which would meet every two weeks beginning February 7, 2002. This Subcommittee would include representatives of any and all Local Agencies that wish to participate.

Mr. Christensen explained that after the standards are proposed by the MWPAAC RWSP subcommittee on July 1, 2002, they will go back to the Local Agencies for confirmation or comment. If substantial comments or revisions occur at this time, it is anticipated that the standards will be resubmitted to the RWSP subcommittee for additional consideration. He repeated the need for Local Agency support of, and participation in, this process before concluding his remarks with an appreciation of Gunars Sreibers' hard work on the I/I Control Program.

Program Update & Workshop Overview
Gunars Sreibers, King County

Mr. Sreibers, outgoing I/I Control Program Manager, gave a brief update on the I/I Control Program status and schedule. He began by noting that "It finally rained" after the third-driest winter on record last year. Mr. Sreibers then explained that the difficult decision to repeat the flow monitoring effort had been rewarded, as the preliminary data from the second round of flow monitors are of excellent quality. The monitors last year provided good baseline data. Several peak rain events this winter and a total volume of rainwater since October 1, 2001 that is 4.3 inches above normal have supplied preliminary data that seem to justify the repeat of the flow monitoring effort.

Mr. Sreibers also updated attendees on the possibility of obtaining federal funding to support additional pilot projects. The request last year for $37 million was not granted; a $9 million request is being pursued this year.

Mr. Sreibers explained that although the selection of pilot projects had been delayed a year, they would be selected over the next few months and finalized at the next workshop on April 30, 2002. He then introduced Dan Sturgill, King County's new I/I Control Program Manager.

Overview of I/I Control Program & Today's Workshop
Dan Sturgill, Incoming Regional I/I Control Program Manager

Mr. Sturgill described his professional experience, including his work with Metro and Local Agencies in developing a regional approach to managing biosolids. He then moved on to the schedule for the I/I Control Program, touching on key elements driving the Program. These include the recent completion of the second round of flow monitoring to supply data for the new hydraulic model (presented at Workshop #5 in 2001). This information, he said, would assist with the selection of pilot projects this spring.

Mr. Sturgill reminded the group of the importance of developing I/I control project standards, a process initiated in 2001 that will continue through the end of 2002 and ultimately be finalized with recommendations in the King County Executive's Plan in 2004 or 2005. The key date in this process is December 31, 2002 when the King County Executive is scheduled to submit draft standards, procedures and policies to the County Council.

Mr. Sturgill also reminded attendees of the I/I Control Program Mission:

> To reduce I/I from the wastewater system, improve the system's cost efficiency and provide environmental and public health benefits.

Standards, procedures and policies will be designed and implemented to support this mission.

Adoption of Standards, Procedures & Policies
Marcos Lopez, Earth Tech Team

Mr. Lopez thanked the Local Agencies for the tremendous amount of work they had put into review of the draft standards. He then emphasized that this was just the first of four steps in the consensus-based, iterative process of developing and adopting the standards:

1. Establish draft I/I control regional standards and policies (July 2001 – January 2002)
2. Submit draft standards and policies to the King County Council by the County Executive on December 31, 2002
3. Implement and evaluate draft standards and policies in pilot projects from 2003 through 2004
4. Revise and adjust standards and policies in 2004 and 2005 based on that evaluation, leading to adoption of standards and policies in the King County Executive's Plan in 2005.

Mr. Lopez then presented the details of the MWPAAC RWSP subcommittee process: following the I/I Control Standards, Procedures and Policies Workshop on January 30, 2002, the MWPAAC RWSP subcommittee would meet twice a month to further develop acceptable standards for recommendation on July 1, 2002. Local Agencies, MWPAAC and King County I/I Control Program staff would review these standards and provide needed changes toward reaching agreement on them by the end of September 2002.

Between October 1 and December 1, 2002 there would be time for more input and briefings with Local Agencies before submittal of proposed standards to the King County Executive on December 1, 2002. Following administrative review, these standards would then be recommended to the King County Council by the King County Executive on December 31, 2002, then sent to the Local Agencies.

Mr. Lopez asked for and received approval of this process from the group. Mr. Lopez then explained that the standards would relate to both project management and construction contracts, and apply to pre-design, design and construction of I/I removal projects. This includes not only pilot projects, but also I/I Control Program projects and future projects that address I/I removal. Mr. Lopez emphasized that consistent policies were also needed for I/I removal projects. He also indicated that since projects might be managed by Local Agencies or King County, some sort of intergovernmental agreement (IGA) would be needed.

Mr. Lopez reviewed the list of the Local Agencies that gave written input on the draft standards, procedures and policies and thanked them for their efforts. He also indicated that input was received from the individual Local Agency meetings. He stated that Local Agency comments placed the standards into three categories: those that are acceptable with minor adjustments; those that received general support but with some concerns and differences; and those with which a number of Local Agencies had major concerns. This workshop would focus on those issues that raised major concerns. It would also ask for input on any other standards, procedures or policy issues that were problematic for the Local Agencies.

Standards Workbook Review Summary: Issues of Concern – *Jeff Lykken, Earth Tech Team*

Mr. Lykken identified the six issues that clearly concerned Local Agencies during their review of the standards, policies and procedures:

1. At-grade cleanouts located at property line
2. Limitation on spot repairs before full pipeline replacement/rehabilitation required
3. Basin modeling and flow monitoring by Local Agencies
4. Leak testing new manholes
5. CCTV inspection at end of warranty period
6. Warranty of private side sewers

A common theme among these six was cost: consultant contractor cost or the cost of additional staff and personnel. Other concerns were that the standards seemed too restrictive, or could be better handled by King County rather than the Local Agency.

Table Discussions Regarding Standards & Procedures

Discussions were held at each of the tables to elicit issues of concern related to standards and procedures for I/I removal projects. A brief summary of issues identified follows.

North #1

1. Added administrative cost is a concern (not any specific cost).
2. Standards are too specific, should focus on the 10% of problems that create 90% of I/I.
3. Standards should be split into two categories: enforced/mandated standards versus recommended standards.
4. Many of the standards focus on things that net only minor benefits (e.g. Manholes).
5. Concern was expressed about standards as unfunded mandates.
6. Concern was expressed about potential conflicts between the I/I program and Endangered Species Act issues, e.g. "Where to put the water?"
7. CCTV inspection of side sewers and private property presents difficulties such as right of entry and construction access.

North #2

1. Private property issues: is an ordinance needed to provide access to private property?
2. Bigger picture: Where does I/I come from? Is it coming from another part of the system? How much is really there?
3. How much comes from water routed from construction sites?
4. How is Seattle's CSO situation being addressed?
5. How much I/I comes from the King County interceptor system, in contrast to the Local Agency systems?

East #1

1. Question: are clean outs upstream or downstream or both?
2. Consensus was to not do post-rehabilitation construction. Initial testing is enough. Doing more would not produce a significant benefit for the cost incurred.

East #2

1. Be careful defining terms, e.g. what do we mean by "structural."
2. Concern was raised regarding the broad variety of side sewer ownership, specifically, how far out from house/building and how far inside or outside of the public right of way?
3. Comment was made: before we implement these design standards, we should develop a policy related to the cost benefit of specific I/I removal standards.
4. It appears that several of the standards focus on other things, not I/I removal. We should identify if the proposed standard truly helps remove I/I, or if there is another purpose for including it.

West #1 :

1. Enforcement of standards will be difficult, especially on private property and in determining responsibility. In several jurisdictions, it is unclear who enforces them or who is responsible for what portions of the side sewer.
2. A comment from the Surrey, BC representative (guest): Surrey tried 11-month warranties on work done on private property, but this brought complaints from developers and had to be abandoned.
3. What are the proposed standards for manhole testing?

South #1 :

1. It makes more sense to have guidance-type standards in cases where the exact fix is unclear or where there are unique circumstances.
2. Older pipes comprise more of the problem, but standards include and even focus on new construction.

South #2:

1. CCTV inspection at end of warranty period is impractical.
2. A number of questions were raised: Are these guidelines or requirements? How will these standards be enforced? What incentive is there to apply the proposed standards? When applied, how do you check that the standards are working?

South #3 :

1. Clean out should not be at right-of-way line if it can be done at house connection (this is private property, policy issue).
2. Warranty period is hard to enforce.
3. Some agencies have had good success with longer warranty periods (e.g. 2 years).
4. What are the effects of a decrease in I/I? (Ideas include ground water and environmental improvements, impact on stormwater system.) Is the benefit to the environment worth the stress to private property owner? This needs analysis and planning.
5. One side sewer issue raised was the concern about homeowners doing their own work. (Concern was expressed that this may lead to low quality work.) Concern was also raised about the quality of side sewer contractors.

Panel Discussion Regarding Standards & Procedures

Question *(Marcos Lopez)*:
Why should the I/I Program look at standards when it could make a greater impact by addressing the Combined Sewer Overflow (CSO) portion of the RWSP?

Response *(Gunars Sreibers):*
The RWSP includes a number of planning issues going simultaneously. There was deliberation by the County Council at that time over how to address combined sewer overflows in a cost-effective way. They recommended we put a separate program together doing storage methodology (new construction has to have storage). There are now two systems: City of Seattle using storage, and a separated system dealing with I/I on a consensus basis.

Question *(Cedar River Water & Sewer District)*:
Has there been a look at the sanitary sewer system with respect to water reuse and its possible relationship with I/I?

Response *(Gunars Sreibers):*
We are looking at opportunities for water reuse right now. As far as its relationship to I/I, not a lot of time has been spent on it. The question of how it might benefit salmon has come up.

Question *(Northshore Utility District)*:
Why is there so much work being put into I/I removal when King County contractors have been told to dump construction water in the sewer system? We are talking about wrapping manholes but on the other hand we are dumping water into the system.

Response *(Gunars Sreibers):*
The I/I Control Program is designed in part to limit the negative impacts of peak flows. King County limits large industrial/construction discharge permits during peak flow periods. We will site-specifically look at removing water at a facility and will issue project-specific permits. There are few permits if any that allow permanent discharges .

Question *(City of Bothell):*
Why are you considering standards that would force us to spend a large amount of money to remove small sources of I/I?

Response *(Marcos Lopez):*
The I/I Control Program will look at the cost effectiveness of standards. We will ask: for the cost, how does it benefit both the County and the Local Agency? We will focus our efforts where we can get the biggest bang for the buck. But in compiling these standards, the Earth Tech Team was directed to compile the best standards for I/I removal, not to consider cost or political realities yet.

(Dan Sturgill):
This is a holistic program. When we are faced with alternatives, the complete range of options needs to be examined. We need your help to get a handle on the biggest bang for the buck and to define where the problems are. We shouldn't reject an alternative just because it is expensive. We need to look at what is needed for I/I removal and be creative in how we might be able to afford it.

(Gunars Sreibers):
When we start looking at this, we will focus on certain quadrants (areas of the wastewater system). We will look at specific areas within these quadrants that seem to have higher discharge. I think that as we look at the data there will be some logic to the priorities.

(Eric Bergstrom):
Pilot projects will tell us where it is cost effective to decrease I/I and will give us additional information about the effectiveness and feasibility of proposed standards.

Question *(City of Bothell):*
What if the Local Agency can't afford or fund I/I removal – will there be funding available?

Response *(Gunars Sreibers):*
This program is focused on regional benefit, and sharing the savings that result from I/I removal. A combination of funding sources will need to be used, from federal to County to the Local Agency. We need to look at where that trade off is and document that.

Question *(City of Redmond):*
Twenty years ago, when Local Agencies were involved in creating regional water standards by consensus, the standards ended up weak since they had to be the lowest common denominator for everyone to agree. What assurance do we have that this consensus process will produce standards that are actually effective, instead of watered down? And are we on the right track, focusing on policies for new construction and development? Doesn't it make sense to have two types of standards: 1) Required; 2) Additional things the Local Agency can do for additional funding? In the end, these standards will be imposed on us through rule setting. Is there another way? What are we actually helping to draft, rules or a wish list?

Response *(Don Theiler):*
It is not necessarily the case that the County would have to impose standards. If the Local Agency doesn't like the standards, we might put in a provision that if they monitor flows and stay within design standards, they can do what they want. But if they can't stay within design standards, they will be asked to comply or maybe face a surcharge. The County could go to this approach and fall back on using a performance standard. The County intends to work with the Local Agencies to solve this problem. It is not correct to say that King County will definitely impose standards; there are alternatives.

(Marcos Lopez):
The I/I program is not laid out linearly, it has multiple tracks that need to be considered at the same time. Should we hold to strict design standards? Do we look at cost effective standards or a performance standard/surcharge approach or both? Our goal is to decrease the amount of I/I in the system and to minimize the increase of I/I due to aging of the system. When we sit with the MWPAAC RWSP Subcommittee and look at standards, we need to look at 2-5 years from now and the large number of issues that may impact the overall Plan.

Comment *(Bryn Mawr-Lakeridge Water & Sewer):*
As soon as you put something in writing it becomes a standard. It becomes a legal issue. For any standard, some districts can do it right away and some can't. If you tell the Local Agency they have to obey a certain level OR ELSE, you had better be prepared to provide the funds for it. Otherwise, it will bring legal issues back to the County for imposing standards without putting money into it.

Comment *(Marcos Lopez):*
We are in discussion with the State Department of Ecology on another issue: the impact of I/I on the environment. If we do not include a standard for it, how do we prove that we are not impacting the environment? We can't assume just because we haven't heard from Ecology that we don't have to have standards, and addressing environmental impacts may prove costly.

Regional I/I Control Program Policies
Lynn Guttmann, Earth Tech Team

Ms. Guttmann briefed the group on the issues raised by Local Agency review of the I/I policy workbook. There were fewer Local Agency comments on the policies than on the standards and procedures, perhaps due to the combination of elections, holidays, and the fact that the policy workbooks were shaped by the standards and thus were issued after them. In-person meetings with Local Agencies highlighted four notable concerns related to policy.

Local Agency Control
Local Agencies generally prefer to maintain control of projects that impact their systems. This has been an important issue since the first I/I workshop in February 2000. Related to this issue is how to integrate I/I standards into existing agency standards: should this be done as a stand-alone addition or integrating individual standards into the existing sets? Another question is, how would standards be modified and who is responsible for this?

Private Property
Since most I/I originates there, the need exists to address private property laterals. This raises several questions, e.g.: how can access be gained to private property? What level of inspection should be required on private property? Who pays for I/I removal on private property? Who owns that portion of the system after the work is done?

Cost of Implementing Standards & Procedures
Who should pay for I/I removal and its associated costs (e.g. inspection, warranty, construction requirements)? How should this funding be structured?

Stormwater Impacts
How would the increase in stormwater runoff resulting from I/I removal be handled? How would additional costs to deal with this stormwater increase be funded? One comment pointed out that the groundwater recharge resulting from increased stormwater may actually be beneficial in maintaining stream flows.

Regional I/I Control Program Intergovernmental Agreement (IGA)
Bob Wheeler, Earth Tech Team

Mr. Wheeler then briefed attendees on issues raised by Local Agency review of the intergovernmental agreement (IGA) portion of the policy workbook. A clear conclusion was that Local Agencies generally prefer to manage projects that impact their systems, though a few of the smaller agencies expressed interest in having King County manage them.

Questions were raised about King County's role in projects managed by Local Agencies:

- Would this be limited to project review?
- Would it include review and approval?
- Would the County just serve as a funding agent?
- If the County is a funding agent, would the technique be payment upon compliance, or certification acceptance and audit?

Additional questions concerned funding:

- What I/I Control Program elements would be eligible for funding?
- Would funding be shared between King County and Local Agencies, or strictly from the County?
- What funding approaches would be used? (Examples of possible funding approaches include reimbursement by the County of Local Agency costs; a Public Works Trust Fund approach, or upfront funding by King County. Local Agencies prefer the upfront funding or Public Works Trust Fund approaches.)

These questions will be addressed as part of the whole I/I Control Program, after the pilot projects provide experience, and after I/I Control Program recommendations are developed.

Mr. Lopez then asked for questions or comments on policy or IGA issues from the whole group. One attendee asked about the process for adopting policies, which Mr. Lopez reiterated: the target date for submittal to the King County Council of recommended I/I policies, in addition to standards and procedures, is December 31, 2002. Leading up to that date, the MWPAAC RWSP Subcommittee would work with Local Agencies to develop standards, procedures and policies that are acceptable to all. It may be that the policies lag behind to some degree since they must be informed by the standards and procedures, and Local Agency approval must be secured on all elements of the King County Executive's recommendations. Eventually, the standards, procedures and policies would be adopted in the King County Executive's Plan in 2005.

Wrap up—What Happens Next?
Marcos Lopez, Earth Tech Team

Mr. Lopez emphasized the following points:

- The process of developing I/I Control Program standards, procedures and policies would continue to be a consensus-based, iterative dialogue between King County and the Local Agencies.
- Any and all Local Agency representatives are welcome to participate in the development of the standards, procedures and policies via the MWPAAC RWSP Subcommittee, which meets for the first time on February 7, 2002 and has another meeting scheduled for February 27, 2002. This body is planning to meet twice monthly, with dates and times to be determined, from March through June in order to complete draft standards, procedures and policies by July 1.

Next Steps

Workshop #8 will be held on April 30, 2002 to select 10 pilot projects. Other dates for pilot project selection are as follows:

- Preliminary flow data and current basin maps sent to Local Agencies by February 7, 2002
- By February 25, Local Agencies propose up to 10 pilot projects each (possible total of 310)
- From February 25 – March 8, pilot projects would be narrowed down to 10 per sub-region (possible total of 70)
- From March 8 – March 22, pilot projects would be narrowed to 10 per region (possible total of 30, since Seattle/West region has elected not to propose pilot projects)
- These thirty proposed pilot projects will be ranked, and a final list of 10 would be determined at Workshop #8 on April 30, 2002.